

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a **Minor, Industrial** permit. The discharge results from the release of groundwater collected from underdrain systems of office buildings in the Carlyle Development located in Alexandria, Virginia. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Carlyle Development II
Carlyle Block B/Block C
Groundwater Management Assoc.
110 Franklin Road, S.E.
Roanoke, VA 24042
SIC Code: 6512
Facility Location: Intersection of Dulaney and Duke Streets in the City of Alexandria City: Alexandria
Facility Contact Name: Lloyd Clingenpeel Telephone Number: 540-981-4909
2. Permit Number: VA0090107 Expiration Date: 21 January 2009
Other VPDES Permits: Not Applicable
Other Permits: Not Applicable
E2/E3/E4 Status: Not Applicable
3. Owner Name: Carlyle Block B/Block C Groundwater Management Association
Owner Contact/Title: Lloyd Clingenpeel Telephone Number: 540-981-4909
President of Association
4. Application Complete Date: 14 January 2009
Permit Drafted By: Doug Frasier and Anna Westernik Date Drafted: 9 February 2009
Draft Permit Reviewed By: Alison Thompson Date Reviewed: 12 February 2009
Public Comment Period: Start Date: 5 June 2009 End Date: 6 July 2009
5. Receiving Waters Information: See **Attachment 1** for the Flow Frequency Determination
Receiving Stream Name: Storm Sewer to Old Cameron Run
Drainage Area at Outfall: 53.1 square miles River Mile: 0.25
Stream Basin: Potomac River Subbasin: Potomac River
Section: 6 Stream Class: II
Special Standards: b, y Waterbody ID: VAN-A13R
7Q10 Low Flow: 0.0 MGD 7Q10 High Flow: 0.0 MGD
1Q10 Low Flow: 0.0 MGD 1Q10 High Flow: 0.0 MGD
Harmonic Mean Flow: 0.0 MGD 30Q5 Flow: 0.0 MGD
303(d) Listed: No 30Q10 Flow: 0.0 MGD
TMDL Approved: Yes – downstream (PCB TMDL) Date TMDL Approved: 31 October 2007
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

<div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> State Water Control Law</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> Clean Water Act</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> VPDES Permit Regulation</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> EPA NPDES Regulation</div>	<div style="margin-bottom: 5px;"><input type="checkbox"/> EPA Guidelines</div> <div style="margin-bottom: 5px;"><input checked="" type="checkbox"/> Water Quality Standards</div> <div style="margin-bottom: 5px;"><input type="checkbox"/> Other:</div>
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7. Licensed Operator Requirements: Not Applicable
8. Reliability Class: Not Applicable

9. Permit Characterization:

<input checked="" type="checkbox"/> Private	<input checked="" type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> State	<input type="checkbox"/> Toxics Monitoring Program Required	<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> POTW	<input type="checkbox"/> Pretreatment Program Required	<input type="checkbox"/> Interim Limits in Other Document
<input type="checkbox"/> TMDL		

10. Wastewater Sources and Treatment Description:

Previous land use included a rail yard, scrap yard, lumberyard, landfill, warehouses, greenhouses and a shopping area. The 75-acre property, divided into 16 blocks of land (Blocks "A" through "P") has been redeveloped into mixed commercial and residential.

This has been a long-term cleanup site. Groundwater encountered in Blocks A, B and C was determined to be contaminated with benzene, toluene, ethylbenzene, xylene, tetrachloroethylene (PCE), trichloroethylene (TCE) and some daughter products of these volatile organic compounds. The source(s) of groundwater contamination at the Carlyle Development have never been fully identified. BTEX is thought to have come from either a service station or a car dealership located along Duke Street. PCE and TCE are also thought to have originated from a service station, car dealership or dry cleaning operation along Duke Street or King Street. BTEX and PCE were the main constituents detected at the site. TCE, (1,1) DCA, (cis -1,2) DCE, (1,1,1) TCA and (1,2) Dichloroethane were also detected at very low concentrations.

On 31 January 1996, VPDES Permit No. VA0089176 was issued for Carlyle I. This permit covered the generation of wastewater along Blocks A, B, and C. However, the only building constructed was the Time Life Building situated on the northwest corner of Block B. Wastewater was generated from construction dewatering and use of an underdrain/sump system for the building garage. The permit established requirements for wastewater discharge under the VPDES program but did not establish remediation goals, criteria or endpoints for the site.

On 12 January 1999, VPDES Permit No. VA0090107 was issued for Carlyle II for lots located on Blocks B and C. On 20 April 2001, the Carlyle II VPDES permit VA0090107 was modified, resulting in the elimination of the Carlyle I treatment system and the associated surface water discharge permit. The groundwater flow from Carlyle I was diverted to the Carlyle II treatment system.

The system was installed entirely below grade and primarily consisted of a 3,200 gallon wet well, a control room and an air dispersal and exchange system. The system was designed to run continuously; however, discharges only occurred when the water in the wet well reached the high level probe (at least once per month). The treatment system was designed to remove chlorinated solvents and other volatile organic chemicals (VOCs) from the groundwater and transfer them into the vapor phase through aeration.

The permittee ceased operation of the treatment system in May 2005. The decision was based on two years of influent data indicating that pollutant concentration levels were consistently below the permit discharge limits. Discharges currently occur to relieve the hydrostatic pressure beneath the parking garages.

Outfall 001 discharges to a storm sewer located on Dulaney Street approximately 20 feet northwest of the treatment system. This storm sewer then follows Jamieson Avenue southwest until it empties into Old Cameron Run.

See **Attachment 2** for the NPDES Permit Rating Worksheet.

See **Attachment 3** for a facility schematic/diagram.

TABLE 1
OUTFALL DESCRIPTION

Outfall Number	Discharge Sources	Treatment	Max 30-day Flow	Outfall Latitude and Longitude
001	Recovered groundwater from sumps beneath office/residential buildings.	See Item 10 above.	0.01 MGD	38° 48' 17" N 77° 03' 47" W
See Attachment 4 – Topographic Map No. 204D (Alexandria)				

11. Sludge Treatment and Disposal Methods: There is no sewage sludge generated at this facility.

12. Intakes and Monitoring Stations in Vicinity of Discharge:
(See **Attachment 5** for all discharges located within Waterbody VAN-A13R)

TABLE 2 INTAKES & MONITORING STATION LOCATIONS		
River Mile	Description	Latitude / Longitude
0.38 Hooff Run	VA Concrete Industrial Water Withdrawal	38° 47' 56" N 77° 03' 40" W
0.01 Hunting Creek	DEQ Monthly Ambient Monitoring Station 1AHUT000.01	38° 47' 23" N 77° 03' 06" W

13. Material Storage: No materials are stored at this site.

14. Site Inspection: See **Attachment 6** for a summary of the site inspection conducted on 16 March 2004.

15. Receiving Stream Water Quality and Water Quality Standards:

a. Ambient Water Quality Data

There is no monitoring data available for the receiving stream. The nearest DEQ ambient monitoring station is 1aHUT000.01, located on Hunting Creek at the George Washington Parkway bridge crossing; approximately 1.2 miles downstream from the location at which Outfall 001 discharges into Old Cameron Run.

There are downstream impairments for Polychlorinated biphenyls (PCBs) and *E. coli* bacteria for Hooff Run and Hunting Creek. The receiving stream, Old Cameron Run, discharges into Hooff Run which in turn discharges into Hunting Creek. The PCB TMDL has been developed and was approved by EPA on 31 October 2007 and includes Hooff Run and Hunting Creek. The TMDL addressing the bacteria impairment for Hunting Creek is scheduled for 2010.

This facility did not receive a WLA for PCBs since it does not discharge the pollutant of concern. There is no WLA planned for the bacteria TMDL due to the same rationale.

b. Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, Old Cameron Run, is located within Section 6 of the Potomac River Basin and classified as Class II water.

Class II tidal waters in the Chesapeake Bay and its tidal tributaries must meet dissolved oxygen concentrations as specified in 9 VAC 25-260-185 and maintain a pH of 6.0– 9.0 standard units as specified in 9 VAC 25-260-50. In the Northern Virginia area, Class II waters must meet the Migratory Fish Spawning and Nursery Designated Use from February 1 through May 31. For the remainder of the year, these tidal waters must meet the Open Water use. The applicable dissolved oxygen concentrations are presented in **Attachment 7**.

Attachment 8 details other water quality criteria applicable to the receiving stream.

c. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Cameron Run, is located within Section 6 of the Potomac River Basin. This section has been designated with special standards of b and y.

Special Standard 'b' (Potomac Embayment Standards) established effluent standards for all sewage plants discharging into Potomac River embayments and for expansions of existing plants discharging into non-tidal tributaries of these embayments. 9 VAC 25-415, the Policy for the Potomac Embayments, controls point source discharges of conventional pollutants into the Virginia embayment waters of the Potomac River, and their tributaries, from the fall line at Chain Bridge in Arlington County to the Route 301 bridge in King George County. The regulation sets effluent limits for BOD₅, total suspended solids, phosphorus, and ammonia to protect the water quality of these high profile waterbodies. The Potomac Embayment Standards are not applicable since this industrial discharge does not contain the pollutants of concern in appreciable amounts.

Special Standard 'y' is the chronic ammonia criterion for tidal freshwater Potomac River and tributaries that enter the tidal freshwater Potomac River from Cockpit Point (below Occoquan Bay) to the fall line at Chain Bridge. During November 1 through February 14 of each year the thirty-day average concentration of total ammonia nitrogen (in mg N/L) shall not exceed, more than once every three years on the average the following chronic ammonia criterion:

$$\left(\frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} \right) \times 1.45(10^{0.028(25 - \text{MAX})})$$

MAX = temperature in °C or 7, whichever is greater

The default design flow for calculating steady state waste load allocations for this chronic ammonia criterion is the 30Q10, unless statistically valid methods are employed which demonstrate compliance with the duration and return frequency of this water quality criterion. This special condition is not applicable since this discharge does not contain the pollutants of concern in appreciable amounts.

d. Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharge. The following threatened or endangered species were identified within a 2 mile radius of the discharge: Brook Floater (mussel), Wood Turtle, Upland Sandpiper (song bird), Loggerhead Shrike (song bird), Henslow's Sparrow (song bird), Appalachian Grizzled Skipper (butterfly), Bald Eagle and Migrant Loggerhead Shrike. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore protect the threatened and endangered species found near the discharge.

The stream that the facility discharges to is within a reach identified as having an Anadromous Fish Use. It is staff's best professional judgment that the proposed limits are protective of this use.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on an evaluation of the flow frequency data, the water quality data from DEQ Ambient Monitoring Station 1aHUT000.01 and the impairment of Hunting Creek/Cameron Run downstream of the discharge. The designation of Hunting Creek/Cameron Run from river mile 2.58 to the confluence with the Potomac River as being impaired is based on data collected at this monitoring station and fish tissue analysis. The proposed monitoring and conditions will provide protection and maintenance of existing uses.

17. Effluent Screening, Wasteload Allocation and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA s) are calculated. In this case, since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLAs are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Effluent data obtained from the Discharge Monitoring Reports (DMRs) dating from February 2004 through August 2008 has been reviewed and determined to be suitable for evaluation. This data is located in the reissuance file.

In addition, the permittee has monitored the influent on a monthly basis for all constituents and daughter products since January 2001. Data indicates that all pollutants of concern, excluding Tetrachloroethylene, have been consistently below detection levels. See **Attachment 9**.

b. Effluent Limitations and Monitoring of Toxic Pollutants at Outfall 001

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. The VPDES Permit Regulation at 9 VA C 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Benzene, Toluene, Ethylbenzene and Xylene (BTEX):

BTEX are common constituents of gasoline typically found in groundwater as a result of spills and/or leaks from underground gasoline storage tanks. As stated earlier, the exact source of the discovered contamination during the initial development has not been determined. Since the Virginia Water Quality Standards do not address acute or chronic toxicity for BTEX, it was staff's best professional judgement to apply the limits set forth in the Corrective Action Plan (CAP) General Permit, 9 VAC 25-120 et seq. during the last reissuance.

On 4 December 2007, the State Water Control Board adopted amendments to the General VPDES Permit Regulation, 9 VAC 25-120 et seq. Limitations for BTEX were not changed and were set forth as follows:

Pollutant	Limit
Benzene	50 µg/L
Toluene	175 µg/L
Ethylbenzene	320 µg/L
Total Xylene	33 µg/L

Influent data (**Attachment 9**) indicates that the pollutants of concern are not present; such that all constituents for BTEX have been found consistently below detection levels. However, due to the history and presence of these contaminants at this location, it is proposed that the permittee monitor for these pollutants with this reissuance.

2) Metals:

Lead has not been detected in either the effluent or influent during the last permit term. This pollutant was included in the last reissuance since it was staff's best professional judgement that any source of BTEX contamination may have occurred during the time leaded fuels were in use.

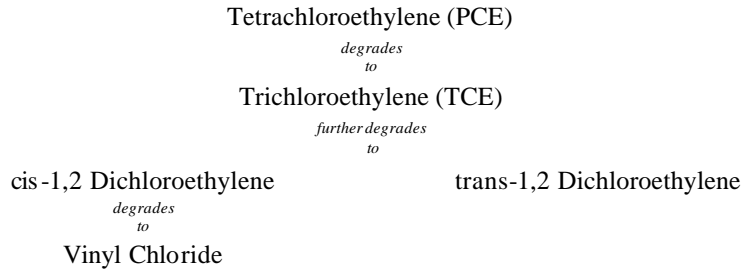
It is proposed that the monitoring requirement be removed with this reissuance.

3) Chlorinated Hydrocarbons:

During the 2004 reissuance, staff also noted that aquatic toxicity criteria had not been promulgated in Virginia for the chlorinated hydrocarbons found in the groundwater at Carlyle II. Therefore, staff utilized the EPA AQUIRE (Aquatic Toxicity Information Retrieval) and ECOTOX databases to derive the limitations and monitoring requirements.

Influent data submitted with the reissuance application revealed that all of the hydrocarbons included in the last permit term were not present; excluding Tetrachloroethylene (PCE).

Chlorinated hydrocarbons form degradation products through the loss of chlorine ions under anaerobic conditions. The following is an illustration of the pathways from the Handbook of Environmental Contaminants by Chris Shineldecker for PCE:



There is no acute or chronic water quality criterion for these pollutants; therefore, based on the influent data and monitoring results during the last permit term, it is staff's best professional judgement that the permittee monitor and report the above pollutant and its degradation products. This is further defensible since the permittee conducted sampling at Outfall 001 and the flow stream emanating from the stormwater box culvert prior to entering Old Cameron Run to illustrate that the PCE is below detectable limits upon entering the receiving stream (**Attachment 10**).

To ensure that the aforementioned sampling event consistently shows that PCE is below detectable limits prior to entering the receiving stream, the permittee shall conduct PCE monitoring at the stormwater box culvert during the first year of this permit on a quarterly basis. This data shall be in addition to the quarterly DMR submittal. If all sampling results indicate that PCE is below detectable limits at the stormwater box culvert, this sampling regime shall cease.

c. Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to the pH limitations are proposed.

pH limitations are set at the water quality criteria.

d. Effluent Limitations and Monitoring Summary

The effluent limitations and monitoring requirements are presented in the following table. Limits were established for pH and monitoring requirements were established for Benzene, Ethylbenzene, Toluene, Xylene, Tetrachloroethylene, Trichloroethylene, cis-1,2 Dichloroethylene, Vinyl Chloride and trans-1,2 Dichloroethylene.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit.

18. Antibacksliding:

9 VAC 25-31-220.L states that a permit may not be renewed, reissued or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. However, 9 VAC 25-31-220.L.2. provides exceptions in which a permit may contain less stringent limitations and continue to protect water quality. The following two instances are applicable to this facility:

- a. Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent limitation; and
- b. Information is available which was not available at the time of permit issuance and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

The permittee provided influent sampling data with this reissuance application; consisting of monthly monitoring of all parameters and daughter products from January 2001 to present. The results indicate that all of the constituents, excluding Tetrachloroethylene (PCE), are not present at detectable levels in the groundwater, even after treatment was removed in May 2005. Historically, it has been documented that over time pollutant levels in groundwater plumes decrease and this is no exception.

Given that the treatment system has been taken off-line and the influent data supplied by the permittee, it is staff's best professional judgement that the proposed conditions within this reissuance are consistent with 9 VAC 25-31-220.

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19. Effluent Limitations/Monitoring Requirements:

Design flow from this industrial outfall is 0.01 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency*	Sample Type
Flow (MGD)	NA	NL	N/A	N/A	NL	1/Q	Estimate
pH	3	N/A	N/A	6.0 S.U.	9.0 S.U.	1/Q	Grab
Benzene	2	N/A	N/A	N/A	NL	1/Q	Grab
Ethylbenzene	2	N/A	N/A	N/A	NL	1/Q	Grab
Toluene	2	N/A	N/A	N/A	NL	1/Q	Grab
Xylene, Total	2	N/A	N/A	N/A	NL	1/Q	Grab
Tetrachloroethylene (PCE)	2	N/A	N/A	N/A	NL	1/Q	Grab
Trichloroethylene (TCE)	2	N/A	N/A	N/A	NL	1/Q	Grab
cis-1,2 Dichloroethylene (cis-1,2 DCE)	2	N/A	N/A	N/A	NL	1/Q	Grab
Vinyl Chloride	2	N/A	N/A	N/A	NL	1/Q	Grab
trans-1,2 Dichloroethylene	2	N/A	N/A	N/A	NL	1/Q	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements
2. Best Professional Judgement
3. Water Quality Standards

MGD = Million gallons per day.

1/Q = Once every calendar quarter.

N/A = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

*The permittee shall submit quarterly sampling results for one year.

If all sampling results do not exceed those limits as stated in 21.e. the permittee may submit a written request to DEQ-NRO for a reduction in the sampling frequency to once every six (6) months (semi-annually).

The quarterly monitoring periods shall be January through March, April through June, July through September and October through December.

The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

The semi-annual monitoring periods shall be January through June and July through December.

The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

20. Other Permit Requirements:

Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

- a. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. Before or on 15 October 2009, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b. Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.
- c. Notification Levels. The permittee shall notify the Department as soon as they know or have reason to believe:
 - (1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (a) One hundred micrograms per liter;
 - (b) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
 - (c) Five times the maximum concentration value reported for that pollutant in the permit application; or
 - (d) The level established by the Board.
 - (2) That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (a) Five hundred micrograms per liter;
 - (b) One milligram per liter for antimony;
 - (c) Ten times the maximum concentration value reported for that pollutant in the permit application; or
 - (d) The level established by the Board.
- d. Materials Handling/Storage. 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- e. Effluent Monitoring Frequency. The permittee, after one year of monitoring, may request a reduction in monitoring frequency to once every six (6) months. If at any time sampling results exceed the following trigger levels, the permittee shall resample within 15 days of receipt to confirm results. If the subsequent sample confirms the results, the permittee shall submit for approval a corrective action plan and the sampling frequency will revert back to once per month:

Parameter	Trigger Level	Basis
Benzene	53 µg/L	calculated toxicity
Ethylbenzene	320 µg/L	calculated toxicity
Toluene	175 µg/L	calculated toxicity
Xylene, Total	33 µg/L	calculated toxicity
Tetrachloroethylene	89 µg/L	WQS for Human Health
Trichloroethylene	810 µg/L	WQS for Human Health
cis-1,2 Dichloroethylene	70 µg/L	Federal drinking water MCL
Vinyl Chloride	61 µg/L	WQS for Human Health
trans-1,2 Dichloroethylene	140,000 µg/L	WQS for Human Health

f. TMDL Reopener. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL that may be developed and approved for the receiving stream.

22. Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

a. Special Conditions:

- The Submittal of Volatile Organic Compound Analysis special condition was removed with this reissuance.
- The Effluent Monitoring Frequency special condition was included with this reissuance.

b. Monitoring and Effluent Limitations:

- The Toxics Management Program requirements were removed with this reissuance. Monitoring during the last permit term did not exhibit any toxicity.
- The following pollutants now only require monitoring with this reissuance: Benzene, Ethylbenzene, Toluene, Xylene and Tetrachloroethylene (PCE) – See Section 18 for a detailed explanation.
- The following pollutants have been removed with this reissuance: Chlorobenzene, Chloroform, Hardness, Total Recoverable Lead, 1,1 Dichloroethane (1,1 DCA), 1,2-Dichloroethane, 1,1,1 Trichloroethane (1,1,1 TCA), Trichlorofluoromethane, Dichlorofluoromethane, 1,1 Dichloroethene, 2,4 Dichlorophenol and Methylene chloride – See Section 18 for a detailed explanation.

24. Variances/Alternate Limits or Conditions: None

25. Public Notice Information:

First Public Notice Date: 4 June 2009 Second Public Notice Date: 11 June 2009

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193; Telephone No. (703) 583-3837; Anna.Westernik@deq.virginia.gov. See **Attachment 11** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

Downstream impairments due to PCBs and bacteria have been noted. However, this facility did not nor will receive a WLA for either of these pollutants of concern due to the nature of the discharge.

27. Additional Comments:

Previous Board Action(s): None.

Staff Comments: This permit was not reissued prior to the expiration date since the facility ownership changed and the application was not received by the required date.

Public Comment: No comments were received during the public notice period.

EPA Checklist: The checklist can be found in **Attachment 12**.

Fact Sheet Attachments

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VA0090107
2009 Reissuance

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M E M O R A N D U M

VIRGINIA WATER CONTROL BOARD
OFFICE OF WATER RESOURCES MANAGEMENT
P. O. Box 11143 Richmond, VA 23230

SUBJECT: 7Q10 FOR HOOFF RUN - VIRGINIA CONCRETE - ALEXANDRIA
TO: LYLE ANNE COLLIER - NRO
FROM: E.W. MORROW *E. W. Morrow*
DATE: APRIL 15, 1992
COPIES: RAG, CHM, MDP

THE 7Q10 FOR HOOFF RUN WAS DEVELOPED USING THE PIKE BRANCH AT ALEXANDRIA GAGE (USGS# 01653210). THIS PARTIAL GAGE HAS A DRAINAGE AREA (D.A.) OF 2.65 SQ.MI. AND A 7Q10 OF 0.0 CFS.

THE D.A. AT THE VIRGINIA CONCRETE - ALEXANDRIA DISCHARGE ON HOOFF RUN IS 1.55 SQ.MI. AND HAS A 7Q10 OF 0.0 CFS.

BY LOOKING AT THE TOPOGRAPHIC MAP, IT IS POSSIBLE THAT HOOFF RUN IS TIDAL AT THE DISCHARGE POINT AND IF SO, THE FRESHWATER INFLOW WILL BE 0.0 CFS AT CRITICAL FLOWS. EMBAYMENT STUDIES FOR HUNTING CREEK BY NORTHERN VIRGINIA PDC AND BY VIMS SHOULD BE REFERRED TO CONCERNING ANY DISCHARGES INTO THIS TIDAL EMBAYMENT.

IF I CAN BE OF ANY FURTHER ASSISTANCE , PLEASE CALL ME AT (804) 527-5126.



NPDES PERMIT RATING WORK SHEET

VPDES NO. : VA0090107

- ☒ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status Change
☐ Deletion

Facility Name: Carlyle Development II

City / County: Alexandria

Receiving Water: Old Cameron Run

Reach Number:

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)

2. A nuclear power Plant

3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ YES; score is 700 (stop here)☒ NO; (continue)☐ Yes; score is 600 (stop here) ☒ NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: Primary Sic Code: 6512 Other Sic Codes:

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input checked="" type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 0

Total Points Factor 1: 0

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50%	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input checked="" type="checkbox"/> 53	30

Code Checked from Section A or B: 53

Total Points Factor 2: 30

NPDES PERMIT RATING WORK SHEET**FACTOR 3: Conventional Pollutants**

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☒ Other: VOCs

Permit Limits: (check one)

<input checked="" type="checkbox"/>	< 100 lbs/day	Code 1	Points 0
<input type="checkbox"/>	100 to 1000 lbs/day	Code 2	Points 5
<input type="checkbox"/>	> 1000 to 3000 lbs/day	Code 3	Points 15
<input type="checkbox"/>	> 3000 lbs/day	Code 4	Points 20

Code Number Checked:

1**Points Scored:**0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

<input type="checkbox"/>	< 100 lbs/day	Code 1	Points 0
<input type="checkbox"/>	100 to 1000 lbs/day	Code 2	Points 5
<input type="checkbox"/>	> 1000 to 5000 lbs/day	Code 3	Points 15
<input type="checkbox"/>	> 5000 lbs/day	Code 4	Points 20

Code Number Checked:

NA**Points Scored:**0C. Nitrogen Pollutants: (check one) ☐ Ammonia ☐ Other: _____

Permit Limits: (check one)

	<i>Nitrogen Equivalent</i>	Code	Points
<input type="checkbox"/>	< 300 lbs/day	1	0
<input type="checkbox"/>	300 to 1000 lbs/day	2	5
<input type="checkbox"/>	> 1000 to 3000 lbs/day	3	15
<input type="checkbox"/>	> 3000 lbs/day	4	20

Code Number Checked:

NA**Points Scored:**0**Total Points Factor 3:**0**FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☐

YES; (If yes, check toxicity potential number below)

☒

NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked:

NA**Total Points Factor 4:**0

NPDES PERMIT RATING WORK SHEET**FACTOR 5: Water Quality Factors**

- A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge*

	Code	Points
<input checked="" type="checkbox"/> YES	1	10
<input type="checkbox"/> NO	2	0

- B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

	Code	Points
<input checked="" type="checkbox"/> YES	1	0
<input type="checkbox"/> NO	2	5

- C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

Code Number Checked: A 1 B 1 C 2
Points Factor 5: A 10 + B 0 + C 0 = 10

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) 53

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input checked="" type="checkbox"/> 3	3	30
<input type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

Enter the multiplication factor that corresponds to the flow code: _____

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 3

Base Score (HPRI Score): 30 X (Multiplication Factor) 0.6 = 18

- B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

Code	Points
<input checked="" type="checkbox"/> 1	10
<input type="checkbox"/> 2	0

- C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

Code	Points
<input type="checkbox"/> 1	10
<input checked="" type="checkbox"/> 2	0

Code Number Checked: A 3 B 1 C 2
Points Factor 6: A 18 + B 10 + C 0 = 28

NPDES PERMIT RATING WORK SHEET

SCORE SUMMARY

<u>Factor</u>	<u>Description</u>	<u>Total Points</u>
1	Toxic Pollutant Potential	0
2	Flows / Streamflow Volume	30
3	Conventional Pollutants	0
4	Public Health Impacts	0
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	28
TOTAL (Factors 1 through 6)		68

S1. Is the total score equal to or greater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

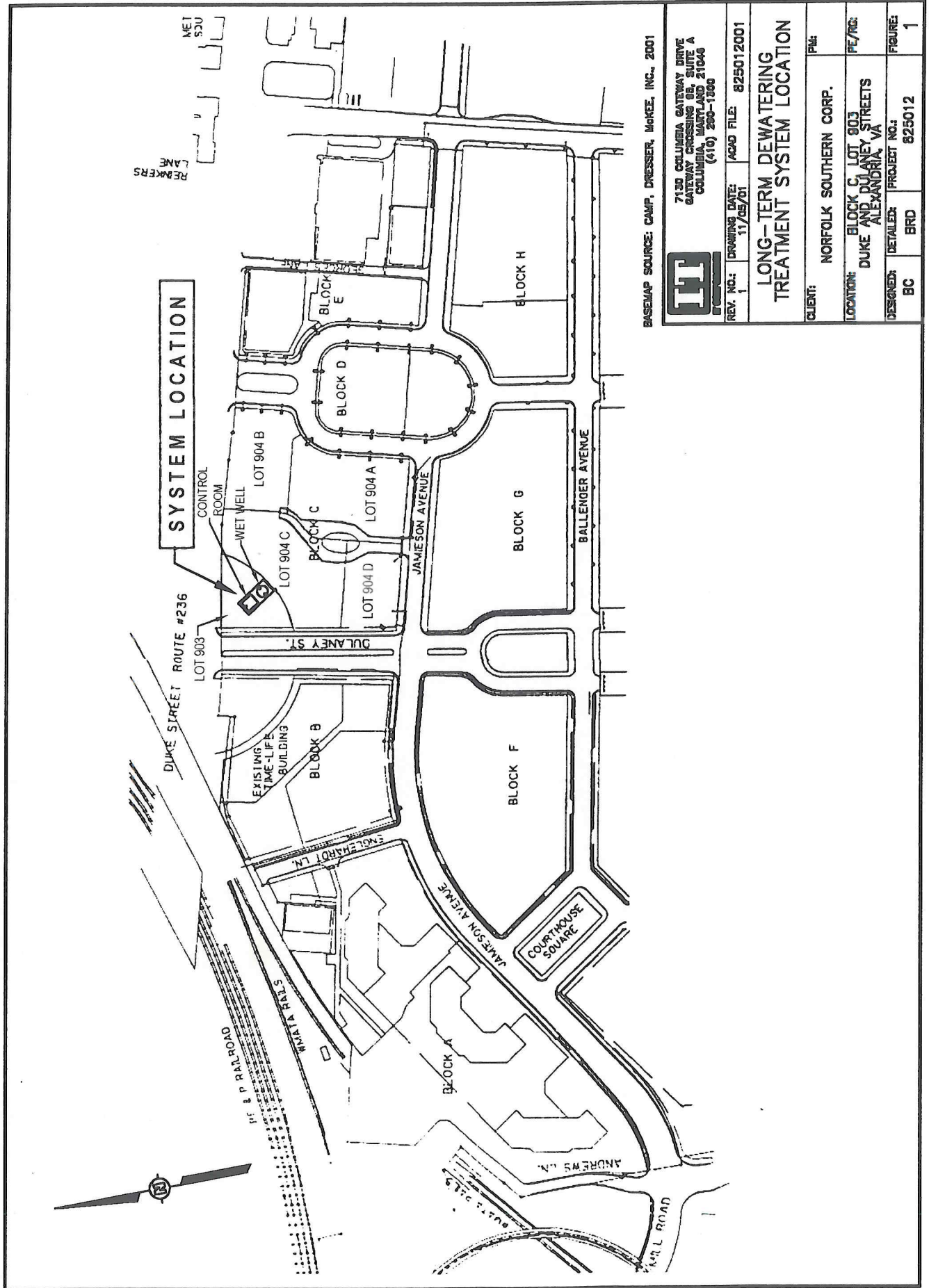
☐ YES; (Add 500 points to the above score and provide reason below:

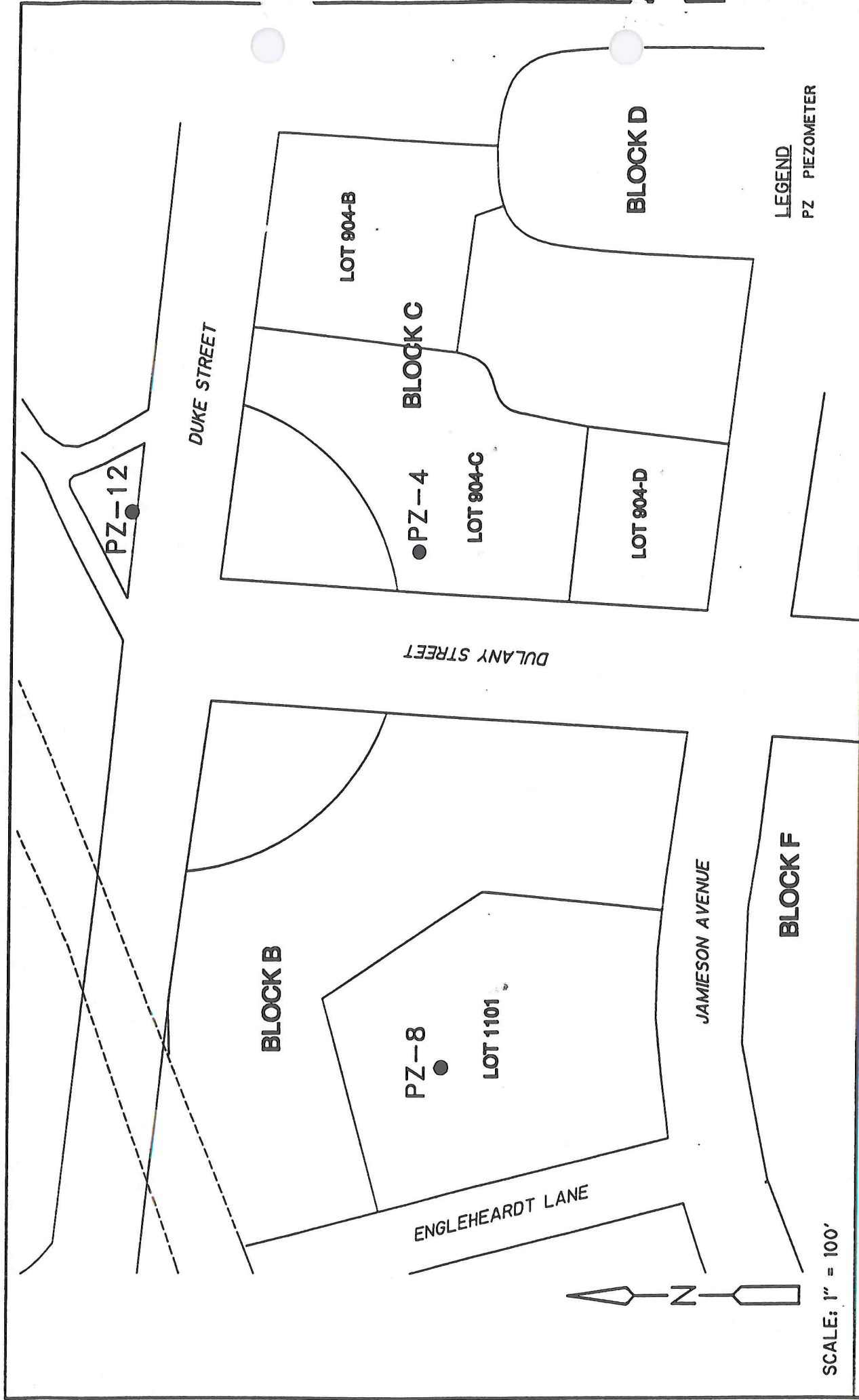
Reason:

NEW SCORE : 68

OLD SCORE : 68

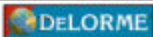
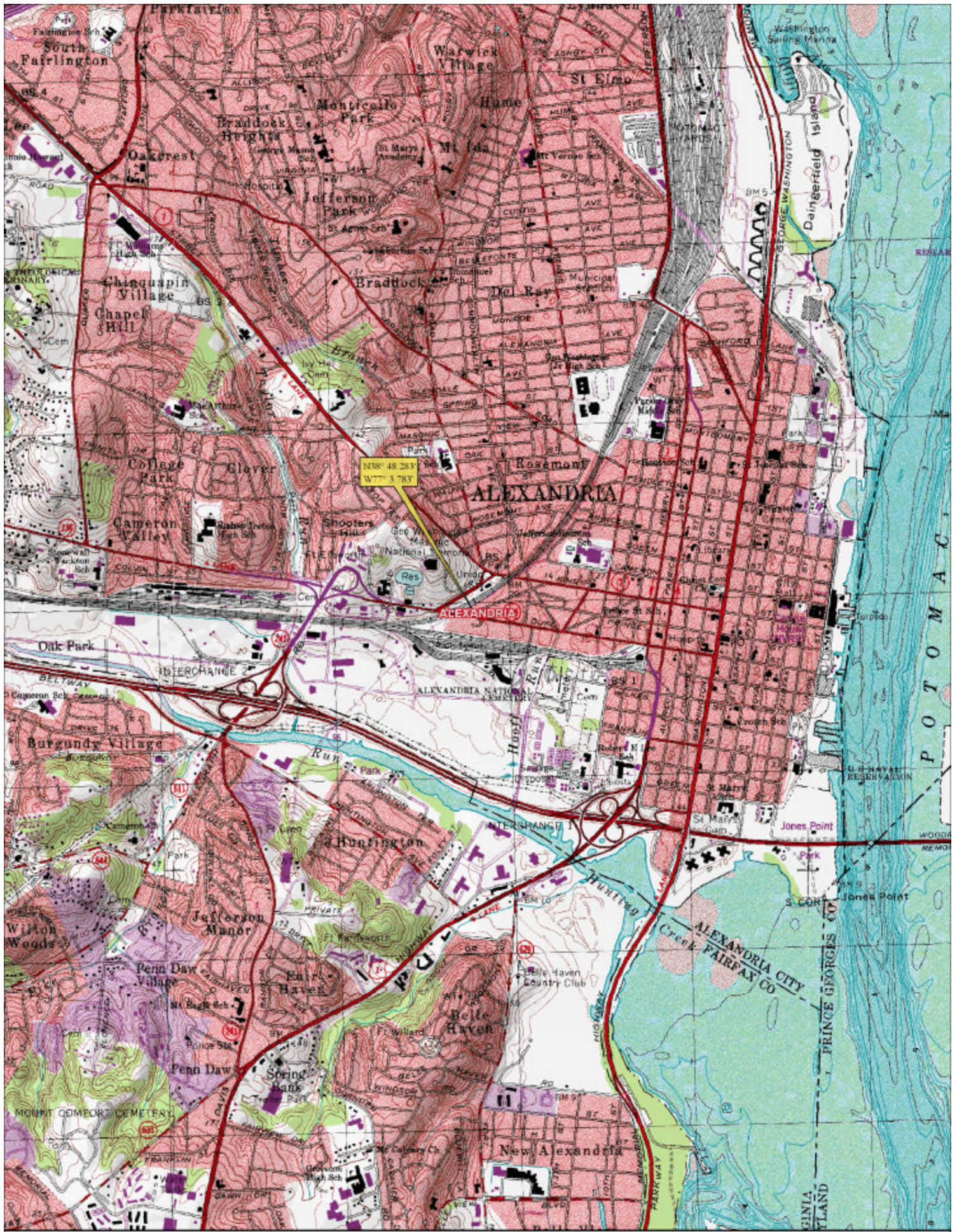
Permit Reviewer's Name : Douglas Frasier
Phone Number: 703-583-3873
Date: 30 January 2009





GROUNDWATER MONITORING LOCATIONS

CARLYLE DEVELOPMENT SITE
ALEXANDRIA, VIRGINIA



Storm Water Industrial			
Permit No	Facility		Receiving Stream
VAR051762	Gordon Recycling Limited Liability Corporation		Backlick Run
VAR051000	Robinson Terminal Warehouse Corp - Wimsatt Road		Backlick Run
VAR051034	Roadway Express Incorporated		Cameron Run
VAR051075	Covanta Alexandria Arlington Incorporated		Cameron Run, UT
VAR051098	WMATA - Alexandria Metro Rail Yard		Cameron Run
VAR051067	US Postal Service - Alexandria Vehicle Maintenance		Taylor Run
VAR051116	Federal Express Corporation NDVA Station		Cameron Run, UT
VAR051503	Alexandria ASA Advanced Wastewater Treatment Plant		Hunting Creek/Hoof Run
Concrete			
Permit No	Facility		Receiving Stream
VAG110009	Virginia Concrete Company Inc - Springfield		Indian Run, UT
VAG110086	Virginia Concrete Company Inc - Alexandria		Backlick Run, UT
Petroleum			
Permit No	Facility		Receiving Stream
VAG830277	Lee High School		Long Branch Creek
VAG830090	Aalans Service Incorporated		Trippe Run
VAG830289	Carlyle Center Limited Liability Corporation		Cameron Run
VAG830181	National Linen Service		Backlick Run
VAG830281	Fannon Petroleum Services Inc - 1300 Duke Street		Hoofs Run
Car Wash			
Permit No	Facility		Receiving Stream
VAG750124	Enterprise Rent A Car - Alexandria		Holmes Run, UT
Individual Permits			
Permit No	Facility Name	Location Address 1	Receiving Stream
VA0089109	US Army - Cameron Station	170 Cameron Station Blvd	Backlick Run
VA0025160	Alexandria ASA Advanced Wastewater Treatment Plant	1500 Eisenhower Ave	Hunting Creek
VA0090107	Carlyle Development II	Dulaney and Duke St	Old Cameron Run

March 21, 2004

Mr. Gibson Barbee
Engineer Environmental Design
Carlyle Development II
110 Franklin Rd SE
Roanoke, VA 24042

Re: Carlyle Development II, Permit VA0090107

Dear Mr. Barbee:

Enclosed is a copy of the technical inspection report generated from observations made on March 16, 2004 while performing a site inspection at the Carlyle Development II site. The compliance/monitoring staff would like to thank your staff for their time and assistance during the inspection.

A summary for the technical inspection and review of the monthly DMR and attachments is enclosed. Please submit in writing a progress report to this office by **April 16, 2004** for the items addressed in the summary.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Virginia Regional Office at (703) 583-3833 or by E-mail at twnelson@deq.state.va.us.

Sincerely,

Terry Nelson
Environmental Specialist II

cc: Permits / DMR File
Compliance Manager
Inspections File
OWPS - Bill Purcell

DEQ
WASTEWATER FACILITY INSPECTION REPORT
PREFACE

VPDES/State Certification No.	(RE) Issuance Date	Amendment Date	Expiration Date				
VA0090107	01/22/2004		01/21/2009				
Facility Name	Address		Telephone Number				
Carlyle Development II	Duke and Delaney Street, Alexandria VA		None on site				
Owner Name	Address		Telephone Number				
Norfolk Southern Railroad	110 Franklin Road SE, Roanoke, VA		540-981-5183				
Responsible Official	Title		Telephone Number				
Jeff Barnes	Engineer, Environmental Operations		540-981-5183				
Responsible Operator	Operator Cert. Class/number		Telephone Number				
Not required	N/A		N/A				
TYPE OF FACILITY:							
DOMESTIC		INDUSTRIAL					
Federal		Major					
Non-federal		Minor					
			X				
			Primary				
			Secondary				
INFLUENT CHARACTERISTICS:		DESIGN:					
	Flow	0.04 MGD					
	Population Served	N/A					
	Connections Served	Groundwater Remediation					
	BOD ₅	N/A					
	TSS	N/A					
EFFLUENT LIMITS: SPECIFY UNITS Units are :g/l unless otherwise specified. Additional parameters are included in the DMR							
Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
Flow (MGD)		NL	NL	1,1,1 Trichloroethane			NL
pH (s.u.)	6		9	Tetrachloroethylene			79
Hardness (mg/l)		NL	NL	Toluene			180
Trichloroethylene			NL	Lead, Total Rec			NL
Ethylbenzene			320	Xylene			82
Benzene			50	1,2 Dichloroethane			NL
	Receiving Stream		Old Cameron Run				
	Basin		Potomac				
	Discharge Point (LAT)		38° 48" 16'				
	Discharge Point (LONG)		77° 03" 47'				

Problems identified at last inspection:	Corrected	Not Corrected
1. No previous inspections of this remediation system have been performed.	[]	[]
2.	[]	[]
3.	[]	[]
4.	[]	[]
5.	[]	[]
6.	[]	[]
7.	[]	[]
8.	[]	[]
9.	[]	[]
10.	[]	[]

SUMMARY

Comments:

This permit includes the discharge from VA0089176 and an additional remediation discharge. Permit VA0089176 was for Carlyle Development Blocks A, B, and C on Jamieson Avenue. Permit VA0090107 is Carlyle Development II on Dulaney Street. Carlyle VA0089176 was inspected on November 30,2000. The following recommendations were also noted in the inspection for VA0089176.

Recommendations for action:

- 1) The flow meter needs to be calibrated by a qualified technician. This calibration should be done on an annual basis and the records maintained by the facility.
- 2) The site inspection form includes the pH of the effluent, but not the time collected nor time analyzed. The facility is reminded that the pH values for DMR reporting are to be analyzed within 15 minutes of collection. All pH values taken onsite are to be used for reporting and the total number of pH values analyzed is to be reported in the frequency of analysis column on the DMR.
- 3) Need calibration records for pH meter used for onsite analysis.
- 4) The Chain of Custody (COC) for the 01/09/2004 sample does not indicate if the dissolved lead sample was filtered in the field. All dissolved metals samples for VPDES reporting are to be field filtered. Footnote 7 of 40 CFR 136.3 states that "Samples should be filtered immediately onsite before adding preservative for dissolved metals." Footnote 4 of the same section defines immediately as within 15 minutes of sample collection.
- 5) The COC needs to clearly state the preservation of each of the samples. This may require that various types of effluent samples be identified on separate lines of the COC with the appropriate preservation noted.
- 6) Table 1.3 in the O&M manual has an invalid phone number for VA DEQ.

Dissolved Oxygen Criteria (9 VAC 25-260-185)

Designated Use	Criteria Concentration/Duration	Temporal Application
Migratory fish spawning and nursery	7-day mean > 6 mg/L (tidal habitats with 0-0.5 ppt salinity)	February 1 – May 31
	Instantaneous minimum > 5 mg/L	
Open-water ^{1,2}	30-day mean > 5.5 mg/L (tidal habitats with 0-0.5 ppt salinity)	Year-round
	30-day mean > 5 mg/L (tidal habitats with >0.5 ppt salinity)	
	7-day mean > 4 mg/L	
	Instantaneous minimum > 3.2 mg/L at temperatures < 29°C Instantaneous minimum > 4.3 mg/L at temperatures > 29°C	
Deep-water	30-day mean > 3 mg/L	June 1-September 30
	1-day mean > 2.3 mg/L	
	Instantaneous minimum > 1.7 mg/L	
Deep-channel	Instantaneous minimum > 1 mg/L	June 1-September 30

¹See subsection aa of 9 VAC 25-260-310 for site specific seasonal open-water dissolved oxygen criteria applicable to the tidal Mattaponi and Pamunkey Rivers and their tidal tributaries.

²In applying this open-water instantaneous criterion to the Chesapeake Bay and its tidal tributaries where the existing water quality for dissolved oxygen exceeds an instantaneous minimum of 3.2 mg/L, that higher water quality for dissolved oxygen shall be provided antidegradation protection in accordance with section 30 subsection A.2 of the Water Quality Standards.

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Carlyle Development II

Permit No.: VA0090107

Receiving Stream: Old Cameron Run

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	mg/L
90% Temperature (Annual) =	deg C
90% Temperature (Wet season) =	deg C
90% Maximum pH =	SU
10% Maximum pH =	SU
Tier Designation (1 or 2) =	1
Public Water Supply (PWS) Y/N? =	n
Trout Present Y/N? =	n
Early Life Stages Present Y/N? =	n

Stream Flows

1Q10 (Annual) =	0 MGD
7Q10 (Annual) =	0 MGD
30Q10 (Annual) =	0 MGD
1Q10 (Wet season) =	0 MGD
30Q10 (Wet season) =	0 MGD
30Q5 =	0 MGD
Harmonic Mean =	0 MGD
Annual Average =	0 MGD

Mixing Information

Annual - 1Q10 Mix =	0 %
- 7Q10 Mix =	0 %
- 30Q10 Mix =	0 %
Wet Season - 1Q10 Mix =	0 %
- 30Q10 Mix =	0 %

Effluent Information

Mean Hardness (as CaCO3) =	50 mg/L
90% Temp (Annual) =	deg C
90% Temp (Wet season) =	deg C
90% Maximum pH =	7.7 SU
10% Maximum pH =	SU
Discharge Flow =	0.01 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	2.7E+03	--	--	na	2.7E+03	--	--	--	--	--	--	--	--	--	--	na	2.7E+03
Acrolein	0	--	--	na	7.8E+02	--	--	na	7.8E+02	--	--	--	--	--	--	--	--	--	--	na	7.8E+02
Acrylonitrile ^C	0	--	--	na	6.6E+00	--	--	na	6.6E+00	--	--	--	--	--	--	--	--	--	--	na	6.6E+00
Aldrin ^C	0	3.0E+00	--	na	1.4E-03	3.0E+00	--	na	1.4E-03	--	--	--	--	--	--	--	--	3.0E+00	--	na	1.4E-03
Ammonia-N (mg/l) (Yearly)	0	1.44E+01	5.81E+00	na	--	1.4E+01	5.8E+00	na	--	--	--	--	--	--	--	--	--	1.4E+01	5.8E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	1.44E+01	5.81E+00	na	--	1.4E+01	5.8E+00	na	--	--	--	--	--	--	--	--	--	1.4E+01	5.8E+00	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.1E+05	--	--	--	--	--	--	--	--	--	--	na	1.1E+05
Antimony	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene ^C	0	--	--	na	7.1E+02	--	--	na	7.1E+02	--	--	--	--	--	--	--	--	--	--	na	7.1E+02
Benzidine ^C	0	--	--	na	5.4E-03	--	--	na	5.4E-03	--	--	--	--	--	--	--	--	--	--	na	5.4E-03
Benzo (a) anthracene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (b) fluoranthene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (k) fluoranthene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Benzo (a) pyrene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Bis(2-Chloroethyl) Ether	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Bis(2-Chloroisopropyl) Ether	0	--	--	na	1.7E+05	--	--	na	1.7E+05	--	--	--	--	--	--	--	--	--	--	na	1.7E+05
Bromoform ^C	0	--	--	na	3.6E+03	--	--	na	3.6E+03	--	--	--	--	--	--	--	--	--	--	na	3.6E+03
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	5.2E+03	--	--	--	--	--	--	--	--	--	--	na	5.2E+03
Cadmium	0	1.8E+00	6.6E-01	na	--	1.8E+00	6.6E-01	na	--	--	--	--	--	--	--	--	--	1.8E+00	6.6E-01	na	--
Carbon Tetrachloride ^C	0	--	--	na	4.4E+01	--	--	na	4.4E+01	--	--	--	--	--	--	--	--	--	--	na	4.4E+01
Chlordane ^C	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.3E-03	na	2.2E-02	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	2.2E-02
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^C	0	--	--	na	3.4E+02	--	--	na	3.4E+02	--	--	--	--	--	--	--	--	--	--	na	3.4E+02
Chloroform ^C	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	4.3E+03	--	--	--	--	--	--	--	--	--	--	na	4.3E+03
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	4.0E+02	--	--	--	--	--	--	--	--	--	--	na	4.0E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	3.2E+02	4.2E+01	na	--	3.2E+02	4.2E+01	na	--	--	--	--	--	--	--	--	--	3.2E+02	4.2E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Copper	0	7.0E+00	5.0E+00	na	--	7.0E+00	5.0E+00	na	--	--	--	--	--	--	--	--	--	7.0E+00	5.0E+00	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	2.2E+01	5.2E+00	na	2.2E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	2.2E+05
DDD ^C	0	--	--	na	8.4E-03	--	--	na	8.4E-03	--	--	--	--	--	--	--	--	--	--	na	8.4E-03
DDE ^C	0	--	--	na	5.9E-03	--	--	na	5.9E-03	--	--	--	--	--	--	--	--	--	--	na	5.9E-03
DDT ^C	0	1.1E+00	1.0E-03	na	5.9E-03	1.1E+00	1.0E-03	na	5.9E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	5.9E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Dibenz(a,h)anthracene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
Dichloromethane (Methylene Chloride) ^C	0	--	--	na	1.6E+04	--	--	na	1.6E+04	--	--	--	--	--	--	--	--	--	--	na	1.6E+04
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	2.6E+03	--	--	--	--	--	--	--	--	--	--	na	2.6E+03
3,3-Dichlorobenzidine ^C	0	--	--	na	7.7E-01	--	--	na	7.7E-01	--	--	--	--	--	--	--	--	--	--	na	7.7E-01
Dichlorobromomethane ^C	0	--	--	na	4.6E+02	--	--	na	4.6E+02	--	--	--	--	--	--	--	--	--	--	na	4.6E+02
1,2-Dichloroethane ^C	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	1.4E+05	--	--	--	--	--	--	--	--	--	--	na	1.4E+05
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	7.9E+02	--	--	--	--	--	--	--	--	--	--	na	7.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^C	0	--	--	na	3.9E+02	--	--	na	3.9E+02	--	--	--	--	--	--	--	--	--	--	na	3.9E+02
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	1.7E+03	--	--	--	--	--	--	--	--	--	--	na	1.7E+03
Dieldrin ^C	0	2.4E-01	5.6E-02	na	1.4E-03	2.4E-01	5.6E-02	na	1.4E-03	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	1.4E-03
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	1.2E+05	--	--	--	--	--	--	--	--	--	--	na	1.2E+05
Di-2-Ethylhexyl Phthalate ^C	0	--	--	na	5.9E+01	--	--	na	5.9E+01	--	--	--	--	--	--	--	--	--	--	na	5.9E+01
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	2.3E+03	--	--	--	--	--	--	--	--	--	--	na	2.3E+03
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	2.9E+06	--	--	--	--	--	--	--	--	--	--	na	2.9E+06
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	1.2E+04	--	--	--	--	--	--	--	--	--	--	na	1.2E+04
2,4 Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	7.7E+02	--	--	--	--	--	--	--	--	--	--	na	7.7E+02
2,4-Dinitrotoluene ^C	0	--	--	na	9.1E+01	--	--	na	9.1E+01	--	--	--	--	--	--	--	--	--	--	na	9.1E+01
Dioxin (2,3,7,8- tetrachlorodibenzo-p- dioxin) (ppq)	0	--	--	na	1.2E-06	--	--	na	na	--	--	--	--	--	--	--	--	--	--	na	na
1,2-Diphenylhydrazine ^C	0	--	--	na	5.4E+00	--	--	na	5.4E+00	--	--	--	--	--	--	--	--	--	--	na	5.4E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	2.4E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	2.4E+02
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	2.4E+02	--	--	--	--	--	--	--	--	--	--	na	2.4E+02
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	8.6E-02	3.6E-02	na	8.1E-01	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	8.1E-01
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	8.1E-01	--	--	--	--	--	--	--	--	--	--	na	8.1E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	2.9E+04	--	--	--	--	--	--	--	--	--	--	na	2.9E+04
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
Fluorene	0	--	--	na	1.4E+04	--	--	na	1.4E+04	--	--	--	--	--	--	--	--	--	--	na	1.4E+04
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	2.1E-03	5.2E-01	3.8E-03	na	2.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	2.1E-03
Heptachlor Epoxide ^C	0	5.2E-01	3.8E-03	na	1.1E-03	5.2E-01	3.8E-03	na	1.1E-03	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.1E-03
Hexachlorobenzene ^C	0	--	--	na	7.7E-03	--	--	na	7.7E-03	--	--	--	--	--	--	--	--	--	--	na	7.7E-03
Hexachlorobutadiene ^C	0	--	--	na	5.0E+02	--	--	na	5.0E+02	--	--	--	--	--	--	--	--	--	--	na	5.0E+02
Hexachlorocyclohexane																					
Alpha-BHC ^C	0	--	--	na	1.3E-01	--	--	na	1.3E-01	--	--	--	--	--	--	--	--	--	--	na	1.3E-01
Hexachlorocyclohexane																					
Beta-BHC ^C	0	--	--	na	4.6E-01	--	--	na	4.6E-01	--	--	--	--	--	--	--	--	--	--	na	4.6E-01
Hexachlorocyclohexane																					
Gamma-BHC ^C (Lindane)	0	9.5E-01	na	na	6.3E-01	9.5E-01	--	na	6.3E-01	--	--	--	--	--	--	--	--	9.5E-01	--	na	6.3E-01
Hexachlorocyclopentadiene	0	--	--	na	1.7E+04	--	--	na	1.7E+04	--	--	--	--	--	--	--	--	--	--	na	1.7E+04
Hexachloroethane ^C	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	4.9E-01	--	--	na	4.9E-01	--	--	--	--	--	--	--	--	--	--	na	4.9E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone ^C	0	--	--	na	2.6E+04	--	--	na	2.6E+04	--	--	--	--	--	--	--	--	--	--	na	2.6E+04
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	4.9E+01	5.6E+00	na	--	4.9E+01	5.6E+00	na	--	--	--	--	--	--	--	--	--	4.9E+01	5.6E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	1.4E+00	7.7E-01	na	5.1E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	na	5.1E-02
Methyl Bromide	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Monochlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.1E+04	--	--	--	--	--	--	--	--	--	--	na	2.1E+04
Nickel	0	1.0E+02	1.1E+01	na	4.6E+03	1.0E+02	1.1E+01	na	4.6E+03	--	--	--	--	--	--	--	--	1.0E+02	1.1E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
N-Nitrosodimethylamine ^C	0	--	--	na	8.1E+01	--	--	na	8.1E+01	--	--	--	--	--	--	--	--	--	--	na	8.1E+01
N-Nitrosodiphenylamine ^C	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
N-Nitrosodi-n-propylamine ^C	0	--	--	na	1.4E+01	--	--	na	1.4E+01	--	--	--	--	--	--	--	--	--	--	na	1.4E+01
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB-1016	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1221	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1232	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1242	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1248	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1254	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1260	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB Total ^C	0	--	--	na	1.7E-03	--	--	na	1.7E-03	--	--	--	--	--	--	--	--	--	--	na	1.7E-03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Pentachlorophenol ^C	0	7.7E-03	5.9E-03	na	8.2E+01	7.7E-03	5.9E-03	na	8.2E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	na	8.2E+01
Phenol	0	--	--	na	4.6E+06	--	--	na	4.6E+06	--	--	--	--	--	--	--	--	--	--	na	4.6E+06
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity	0	--	--	na	1.5E+01	--	--	na	1.5E+01	--	--	--	--	--	--	--	--	--	--	na	1.5E+01
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	na	4.0E+00
Strontium-90	0	--	--	na	8.0E+00	--	--	na	8.0E+00	--	--	--	--	--	--	--	--	--	--	na	8.0E+00
Tritium	0	--	--	na	2.0E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	--	--	--	na	2.0E+04
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	2.0E+01	5.0E+00	na	1.1E+04	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	na	1.1E+04
Silver	0	1.0E+00	--	na	--	1.0E+00	--	na	--	--	--	--	--	--	--	--	--	1.0E+00	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	1.1E+02	--	--	na	1.1E+02	--	--	--	--	--	--	--	--	--	--	na	1.1E+02
Tetrachloroethylene ^C	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Thallium	0	--	--	na	6.3E+00	--	--	na	6.3E+00	--	--	--	--	--	--	--	--	--	--	na	6.3E+00
Toluene	0	--	--	na	2.0E+05	--	--	na	2.0E+05	--	--	--	--	--	--	--	--	--	--	na	2.0E+05
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	7.5E-03	7.3E-01	2.0E-04	na	7.5E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	na	7.5E-03
Tributyltin	0	4.6E-01	6.3E-02	na	--	4.6E-01	6.3E-02	na	--	--	--	--	--	--	--	--	--	4.6E-01	6.3E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	9.4E+02	--	--	--	--	--	--	--	--	--	--	na	9.4E+02
1,1,2-Trichloroethane ^C	0	--	--	na	4.2E+02	--	--	na	4.2E+02	--	--	--	--	--	--	--	--	--	--	na	4.2E+02
Trichloroethylene ^C	0	--	--	na	8.1E+02	--	--	na	8.1E+02	--	--	--	--	--	--	--	--	--	--	na	8.1E+02
2,4,6-Trichlorophenol ^C	0	--	--	na	6.5E+01	--	--	na	6.5E+01	--	--	--	--	--	--	--	--	--	--	na	6.5E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	6.1E+01	--	--	na	6.1E+01	--	--	--	--	--	--	--	--	--	--	na	6.1E+01
Zinc	0	6.5E+01	6.6E+01	na	6.9E+04	6.5E+01	6.6E+01	na	6.9E+04	--	--	--	--	--	--	--	--	6.5E+01	6.6E+01	na	6.9E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	4.3E+03
Arsenic	9.0E+01
Barium	na
Cadmium	3.9E-01
Chromium III	2.5E+01
Chromium VI	6.4E+00
Copper	2.8E+00
Iron	na
Lead	3.4E+00
Manganese	na
Mercury	5.1E-02
Nickel	6.8E+00
Selenium	3.0E+00
Silver	4.2E-01
Zinc	2.6E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Table 1
Historic Influent Data
VA0090107 - Carlyle Development II

Compound	Unit	MCL	10/15/2001	10/16/2001	10/17/2001	10/18/2001	10/19/2001	10/20/2001	10/21/2001	10/24/2001	10/31/2001	11/14/2001	12/5/2001	1/2/2002	2/6/2002	3/7/2002	4/9/02	5/7/02	6/10/02	7/10/02
pH		-	7.93	7.67	6.83	6.3	6.82	6.63	6.75		7.16	7.2	7.62	7.4	7.08	6.85	8.12	8.09	7.40	8.27
Hardness (mg/L as CaCO ₃)	mg/L as CaCO ₃	-	120	180	170	170	190	190	190	190	130	190	130	140	180	160	160	160	150	220
Acetone	ug/L	-	15	13	1500	7.9	<5	-	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Acrolein	ug/L	-	-	-	-	-	-	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Acrylonitrile	ug/L	-	-	-	-	-	-	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Benzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	-	1.7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	ug/L	5	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5
Chlorobenzene	ug/L	100	<1	<1	<1	<1	<1	<1	5.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	ug/L	-	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	<5	<5	<5	<5
Chloroethane	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Chloroethylvinyl ether	ug/L	-	-	-	-	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	ug/L	-	6.6	2.6	2.6	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloromethane	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-chloropropane	ug/L	0.2	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	<5	<5	-
1,2-Dibromoethane	ug/L	5	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	ug/L	600	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	ug/L	75	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
cis-1,3-dichloropropene	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1,3-dichloropropene	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	ug/L	700	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	ug/L	-	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Butanone	ug/L	-	180	110	44000	160	11	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	ug/L	-	<5	<5	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	ug/L	-	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	ug/L	-	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	ug/L	5	71	220	81	250	280	190	210	210	64	200	130	97	160	160	130	140	100	110
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	7.4	27	<5	11
1,1,1-Trichloroethane	ug/L	200	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	5	<1	<1	<1	<1	1.5	<1	<5	<5	<5	<5	<5	<5	6	<5	16	19.0	41	25
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylene, Total	ug/L	10000	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-
Lead, Total	mg/L	0.015	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 1
Historic Influent Data
VA0090107 - Carlyle Development II

Compound	Unit	MCL	Sample Date																		
			8/8/02	9/12/02	10/10/02	11/7/02	12/13/02	1/6/03	2/5/03	3/4/03	4/4/03	5/22/03	6/6/2003	7/14/2003	8/1/2003	9/3/2003	10/8/2003	11/3/2003	12/4/2003	1/9/2004	
pH		-	8.09	8.10	7.68	-	8.30	8.30	8.59	8.03	8.37	8.32	8.42		7.73	8.94	8.44	6.47	7.66	7.67	
Hardness (mg/L as CaCO ₃)	mg/L as CaCO ₃	-	180	200	160	170	170	130	150	90	94.5	81	84	No influent samples taken because the influent lines to the treatment system were damaged during construction.	150	85	104	79.9	89	110	
Acetone	ug/L	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
Acrolein	ug/L	-	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25		<25	<25	<25	<25	<25	<25	
Acrylonitrile	ug/L	-	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25		<25	<25	<25	<25	<25	<25	
Benzene	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Bromodichloromethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Bromoform	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Bromomethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Carbon Tetrachloride	ug/L	5	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	
Chlorobenzene	ug/L	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Chloroethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2-Chloroethylvinyl ether	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
Chloroform	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
Chloromethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,2-Dibromo-3-chloropropane	ug/L	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1,2-Dibromomethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,2-Dichlorobenzene	ug/L	600	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,4-Dichlorobenzene	ug/L	75	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,3-Dichlorobenzene	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,1-Dichloroethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,2-Dichloroethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,1-Dichloroethene	ug/L	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
cis-1,2-Dichloroethene	ug/L	70	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
trans-1,2-Dichloroethene	ug/L	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,2-Dichloropropane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
cis-1,3-dichloropropene	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
trans-1,3-dichloropropene	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
Ethylbenzene	ug/L	700	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2-Hexanone	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dichloromethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2-Butanone	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4-Methyl-2-pentanone	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1,1,1,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tetrachloroethene	ug/L	5	96	30	110	95	93	140	120	98	97	5.6	24	No influent samples taken because the influent lines to the treatment system were damaged during construction.	59	42	8.2	5.1	6.6	16	
Toluene	ug/L	1000	10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
1,1,1-Trichloroethane	ug/L	200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
1,1,2-Trichloroethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Trichloroethene	ug/L	5	<5	6.1	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	16	7	<5	<5	<5	
Trichlorofluoromethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Vinyl Chloride	ug/L	2	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5	<5	<5	<5	
Xylene, Total	ug/L	10000	-	-	-	-	-	-	-	-	-	-	-		<0.002	<0.002	<0.1	<0.1	<0.1	<0.1	<0.002
Lead, Total	mg/L	0.015	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0043		<0.002	<0.1	<0.1	<0.1	<0.1	<0.1	<0.002

Table 1
Historic Influent Data
VA0090107 - Carlyle Development II

Compound	Unit	MCL	2/19/2004	4/7/2004	7/9/2004	10/7/2004	1/12/2005	4/5/2005	7/6/2005	10/6/2005	1/20/2006	6/1/2006	9/22/2006	10/6/2006	1/24/2007	4/6/2007	8/23/2007	10/6/2007	2/6/2008	7.4	6.8	8/28/2008
pH		-	7.52	8.35	7.96	8.01	8.01	8.3	8.0	7.9	8.0	8.3	7.0	6.9	6.8	7.6	7.4	7.4	182	186	188	
Hardness (mg/L as CaCO ₃)	mg/L as CaCO ₃		131	181	190	190	190	220	200	270	200	220	340	100	200	260	240	246				
Acetone	ug/L	-																				
Acrolein	ug/L	-	<25	<25	<25	<25	<25				<5	<5	<10	<5	<25		<5		<1	<10	<10	
Acrylonitrile	ug/L	-	<25	<25	<25	<25	<25				<5	<5	<5	<5	<5		<5		<1	<10	<10	
Benzene	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Bromodichloromethane	ug/L	-	<5	<5	<5	<5	<5				<5	<5	5.1	<5	<5	<5	<5	<5	<0.5	<5	<5	
Bromoform	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
Bromomethane	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
Carbon Tetrachloride	ug/L	5									<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Chlorobenzene	ug/L	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Dibromochloromethane	ug/L	-									<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
Chloroethane	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
2-Chloroethylvinyl ether	ug/L	-	<5	<5	<5	<5	<5				<5	<25	<5	<10	<5		<5		<1	<10	<10	
Chloroform	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	13	7.1	<5	<5	<5	<5	<5	<0.5	<5	<5	
Chloromethane	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
1,2-Dibromo-3-chloropropane	ug/L	0.2																				
1,2-Dibromomethane	ug/L	5	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
1,2-Dichlorobenzene	ug/L	600	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
1,4-Dichlorobenzene	ug/L	75	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
1,3-Dichlorobenzene	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
1,1-Dichloroethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
1,2-Dichloroethane	ug/L	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
cis-1,2-Dichloroethene	ug/L	70	<5	6.3	14	6.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
trans-1,2-Dichloroethene	ug/L	100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
1,2-Dichloropropane	ug/L	5	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
cis-1,3-dichloropropene	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
trans-1,3-dichloropropene	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Ethylbenzene	ug/L	700	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
2-Hexanone	ug/L	-																				
Dichloromethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5				
2-Butanone	ug/L	-																				
4-Methyl-2-pentanone	ug/L	-																				
1,1,2,2-Tetrachloroethane	ug/L	-	<5	<5	<5	<5	<5				<5	<5	<5	<5	<5		<5		<0.5	<5	<5	
Styrene	ug/L	-																				
1,1,1,2-Tetrachloroethane	ug/L	-																				
Tetrachloroethene	ug/L	5	9.7	17	8.7	8.1	12	<5	<5	<5	9.9	18.0	11.0	15.0	25.0	13.0	14.0	7.3	17.0	17.0	7.7	
Toluene	ug/L	1000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
1,1,1-Trichloroethane	ug/L	200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
1,1,2-Trichloroethane	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Trichloroethene	ug/L	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Trichlorofluoromethane	ug/L	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Vinyl Chloride	ug/L	2	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	
Xylene, Total	ug/L	10000																				
Lead, Total	mg/L	0.015	<0.002	<0.002	<0.002	<0.002	<0.002	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	

ANALYTICAL RESULTS

Prepared for:

Camp Dresser & McKee, Inc.
3715 Northside Pkwy NW
Northcreek 300 Suite 400
Atlanta GA 30327

404-720-1400

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

April 28, 2009

SAMPLE GROUP

The sample group for this submittal is 1142119. Samples arrived at the laboratory on Saturday, April 25, 2009.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MILL-01 Grab Water Sample	5655825
MILL-01 DUP Grab Water Sample	5655826
MAN-01 Grab Water Sample	5655827
MAN-01 DUP Grab Water Sample	5655828
Trip Blank Water Sample	5655829

METHODOLOGY

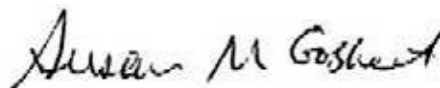
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Chronicle.

ELECTRONIC Camp Dresser & McKee, Inc.
COPY TO

Attn: Robert Huguenard

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300

Respectfully Submitted,



Susan M. Goshert
Group Leader



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 5655825

Group No. 1142119

VA

MILL-01 Grab Water Sample
Carlyle

Collected: 04/24/2009 09:30 by VA

Account Number: 00442

Submitted: 04/25/2009 10:00

Camp Dresser & McKee, Inc.

Reported: 04/28/2009 at 11:40

3715 Northside Pkwy NW

Discard: 05/13/2009

Northcreek 300 Suite 400

Atlanta GA 30327

MILL1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles		ug/l	ug/l	
07582	Tetrachloroethene	127-18-4	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07582	PPL + Xylene (total) by 8260	SW-846 8260B	1	L091172AA	04/27/2009 20:58	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L091172AA	04/27/2009 20:58	Daniel H Heller	1



Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW 5655826

Group No. 1142119

VA

MILL-01 DUP Grab Water Sample
Carlyle

Collected: 04/24/2009 09:30 by VA

Account Number: 00442

Submitted: 04/25/2009 10:00

Camp Dresser & McKee, Inc.

Reported: 04/28/2009 at 11:40

3715 Northside Pkwy NW

Discard: 05/13/2009

Northcreek 300 Suite 400

Atlanta GA 30327

MIL1D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles		ug/l	ug/l	
07582	Tetrachloroethene	127-18-4	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07582	PPL + Xylene (total) by 8260	SW-846 8260B	1	L091172AA	04/27/2009 21:19	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L091172AA	04/27/2009 21:19	Daniel H Heller	1



Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW 5655827

Group No. 1142119

MAN-01 Grab Water Sample
Carlyle

VA

Collected: 04/24/2009 10:30 by VA

Account Number: 00442

Submitted: 04/25/2009 10:00

Camp Dresser & McKee, Inc.

Reported: 04/28/2009 at 11:40

3715 Northside Pkwy NW

Discard: 05/13/2009

Northcreek 300 Suite 400

Atlanta GA 30327

01MAN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles		ug/l	ug/l	
07582	Tetrachloroethene	127-18-4	8	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07582	PPL + Xylene (total) by 8260	SW-846 8260B	1	L091172AA	04/27/2009 21:41	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L091172AA	04/27/2009 21:41	Daniel H Heller	1



Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW 5655828

Group No. 1142119

MAN-01 DUP Grab Water Sample
Carlyle

VA

Collected: 04/24/2009 10:30 by VA

Account Number: 00442

Submitted: 04/25/2009 10:00

Camp Dresser & McKee, Inc.

Reported: 04/28/2009 at 11:40

3715 Northside Pkwy NW

Discard: 05/13/2009

Northcreek 300 Suite 400

Atlanta GA 30327

1DMAN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles		ug/l	ug/l	
07582	Tetrachloroethene	127-18-4	8	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07582	PPL + Xylene (total) by 8260	SW-846 8260B	1	L091172AA	04/27/2009 22:03	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L091172AA	04/27/2009 22:03	Daniel H Heller	1



Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. WW 5655829

Group No. 1142119
VA

Trip Blank Water Sample
Carlyle

Collected: 04/24/2009

Account Number: 00442

Submitted: 04/25/2009 10:00

Camp Dresser & McKee, Inc.

Reported: 04/28/2009 at 11:40

3715 Northside Pkwy NW

Discard: 05/13/2009

Northcreek 300 Suite 400

Atlanta GA 30327

CDMTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles		ug/l	ug/l	
07582	Tetrachloroethene	127-18-4	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07582	PPL + Xylene (total) by 8260	SW-846 8260B	1	L091172AA	04/27/2009 19:08	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	L091172AA	04/27/2009 19:08	Daniel H Heller	1

Quality Control Summary

Client Name: Camp Dresser & McKee, Inc.

Group Number: 1142119

Reported: 04/28/09 at 11:40 AM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: L091172AA Tetrachloroethene	Sample number(s): 5655825-5655829							
	N.D.	0.8	ug/l	102	101	79-115	1	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: L091172AA Tetrachloroethene	Sample number(s): 5655825-5655829 UNSPK: P654687								
	114		80-128						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PPL + Xylene (total) by 8260

Batch number: L091172AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5655825	101	99	101	99
5655826	102	98	102	100
5655827	101	98	103	99
5655828	102	98	102	99
5655829	101	98	102	100
Blank	103	99	102	100
LCS	103	97	103	103
LCSD	102	97	103	103
MS	103	99	103	103
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 442 Group # 11421A Sample # 5655825-29 **COC #** 210965

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CDM</u> Acct. #: _____ Project Name/ #: <u>CARLYLE</u> PWSID #: _____ Project Manager: <u>BDB HUGENARD</u> P.O. #: _____ Sampler: <u>VANESSA ARIZIGUZO/DAVID MICHAEL</u> Quote #: _____ Name of state where samples were collected: <u>VA</u>				4 Matrix <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Other <input type="checkbox"/> Grab <input type="checkbox"/> Composite		5 Analyses Requested Preservation Codes										For Lab Use Only FSC: _____ SCR#: <u>150204</u>						
						HCL PPL + XYLENE (Total) 8250										6 Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
2 Sample Identification				3 Date Collected Time Collected		Grab Composite		Soil Water Other		Total # of Containers		Remarks										9 Temperature of samples upon receipt (if requested)
MILL-01				09/04/24 0930		X		X		3		X										
MILL-01 DUP				0930		X		X		3		X										
MAN-01				1030		X		X		3		X										
MAN-01 DUP				1030		X		X		3		X										
TRIP BLANK								X		2		X										
TRIP B ^{VA} 09/04/24																						
7 Turnaround Time Requested (TAT) (please circle): Normal Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: <u>404-720-1400</u> Fax #: _____ E-mail address: _____				Relinquished by: <u>[Signature]</u> Date <u>7/22/09</u> Time <u>1345</u> Relinquished by: <u>[Signature]</u> Date <u>09/04/24</u> Time <u>1230</u> Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____										Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: <u>Kapriel Hartlove</u> Date <u>4/25/09</u> Time <u>10:00</u>								
8 Data Package Options (please circle if required) Type I (validation/NJ Reg) TX TRRP-13 Type II (Tier II) MA MCP CT RCP Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes <u>(No)</u> Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.) Type VI (Raw Data Only) Internal COC Required? Yes / No _____				SDG Complete? Yes <u>(No)</u>																		

Environmental Sample Administration Receipt Documentation Log

Client/Project: CDM
Date of Receipt: 4/25/09
Time of Receipt: 10:00
Source Code: 801
Unpacker Emp. No.: 2114

Shipping Container Sealed: YES NO
Custody Seal Present *: YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	0177	2.5	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Barry Harrison	4/25/09	13:30	Unpacking to storage
Phil G. M.	4/25/09	1344	Place in Storage or <u>Entry</u>
			Entry
			Entry

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated groundwater into a water body in the City of Alexandria, Virginia.

PUBLIC COMMENT PERIOD: June 5, 2009 to 5:00 p.m. on July 6, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Carlyle Block B/Block C Groundwater Management Association
110 Franklin Road, S.E., Roanoke, VA 24042
VA0090107

NAME AND ADDRESS OF FACILITY: Carlyle Development II
Intersection of Dulaney and Duke Streets in the City of Alexandria

PROJECT DESCRIPTION: Carlyle Block B/Block C Groundwater Management Association has applied for a reissuance of a permit for the private Carlyle Development II. The applicant proposes to release treated groundwater at a rate of 0.01 million gallons per day into a water body. Sludge is not generated at this facility. The facility proposes to release the treated groundwater in the Old Cameron Run in the City of Alexandria in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, Benzene, Ethylbenzene, Toluene, Xylene, Tetrachloroethylene, Trichloroethylene, cis -1,2 Dichloroethylene, Vinyl Chloride and trans -1,2 Dichloroethylene.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.

Name: Douglas Frasier

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3873 E-mail: Douglas.Frasier@deq.virginia.gov Fax: (703) 583-3821

Revised 2/2003

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Carlyle Development II
NPDES Permit Number:	VA0090107
Permit Writer Name:	Douglas Frasier
Date:	10 February 2009

Major []

Minor [X]

Industrial [X]

Municipal []

I.A. Draft Permit Package Submittal Includes:

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?			X
a. Has a TMDL been developed and approved by EPA for the impaired water?			X
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	

LB. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State’s standard policies or procedures?			X
14. Are any WQBELs based on an interpretation of narrative criteria?			X
15. Does the permit incorporate any variances or other exceptions to the State’s standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility’s discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a “reasonable measure of ACTUAL production” for the facility (not design)?			X
5. Does the permit contain “tiered” limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?		X	
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a “reasonable potential” evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?			X
d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	X		
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			X
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?			X
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			X
8. Does the fact sheet indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	X		

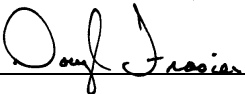
II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State’s standard practices?			X

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			X
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			X

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41			
Duty to comply	Property rights	Reporting Requirements	
Duty to reapply	Duty to provide information	Planned change	
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance	
not a defense	Monitoring and records	Transfers	
Duty to mitigate	Signatory requirement	Monitoring reports	
Proper O & M	Bypass	Compliance schedules	
Permit actions	Upset	24-Hour reporting	
		Other non-compliance	
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Douglas Frasier</u>
Title	<u>Environmental Specialist II</u>
Signature	<u></u>
Date	<u>10 February 2009</u>